Ad. No: .....
Name: .....

DARUL HUDA EXAMINATION BOARD
ANNUAL EXAMINATION - MARCH 2023
SECONDARY SECOND YEAR (II)

Time: 2 hr(s) **MATHEMATICS** **Marks: 70**

I. Fill in the blanks (any 5 of the following) 5X2=10

1. The ratio of 3km to 300m is .....
2. Write 8/20 as percent .....
3. The sum of (5/4) + (-11/4) is .....
4. The product of (9/2) x (-7/4) .....
5. The distance around a circular region is known as its .....
6. Area of a parallelogram = ...
7. The value of π = ... or .....
8. The total measure of the three angles of a triangle is .....

II. Multiple choice questions 5x1=5

9. The number ..... is neither a positive nor a negative rational number.

a. 0 b. 1/1 c. 1 d. 0/1

10. Any expression with one or more terms is called as

a. Monomial b.Polynomial c. Binomial d. Trinomial.

11. $a^m \times a^n =$

a. a^{m+n} b. a^{mn} c. a^{m-n} d. a^m

12. 0.07 is equal to

a. 70% b. 0.7% c. 7% d. 0.07%

13. A cricket bat was purchased for 800 and was sold for 1600 then profit is

a. 100% b. 60% c. 64% d. 50%

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III. Match the following 5x1 = 5

14. 3/5	(a) 0
15. -2/3	(b) l x b
16. Circle	(c) 60%
17. Area	(d) Circumference
18. a^0	(e) Surface Area
	(f) 1
	(g) -10/15

IV. Answer *any eight* of the following 8x5=40

19. Find the ratio of

a. 15kg to 210g
b. 9m to 27cm
c. 5rupees to 50paisa
d. 30 days to 36 hours

20. Convert the given decimal to percent.

a. 0.65
b. 0.02
c. 2.1
d. 12.35

21. The population of a city decreases from 25000 to 24500. Find the percentage decrease?

22. Find the product

a. (9/2)x(-7/4)
b. (3/7)x(-2/5)
c. (3/10)x(-9)
d. (3/11)x(2/5)

23. Construct an equilateral triangle of side 5cm?

24. Find the area of a square park, whose perimeter is 360m?

25. Diameter of a circular garden is 10.4m. Find its area?

26. 1) Add 3mn, -5mn, 8mn, -4mn. 2) Subtract 6xy from 12xy.

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27. Find the value of the following expression when x= -1.

a. 2x-7 c. -x+2

b. $x^2 + 2x + 1$ d. $2x^2 - x - 2$

28. Express each of the following numbers using exponential notations

a. 512 b. 343

V) Answer *any four* of the following **4x5=20**

29. Ahmed bought a watch and saved rupees 20 when a discount of 25% was given. What was the price of the watch before the discount?

30. Draw the number line and represent the following rational numbers on it. a. 1/2 b. 3/5 c. 4/5 d. 4/6 e. -7/5

31. Construct a triangle ABC such that AB=3 cm, BC=6 cm, AC=7 cm, measure angle B.

32. If the circumference of a circular sheet is 154m. Find its radius and also find the area of the sheet, (take π=22/7).

33. Subtract $4pq - 5q^2 - 3p^2$ *from* $5p^2 + 3q^2 - pq$

34. Express the following in exponential form

a. $6 \times 6 \times 6 \times 6$ b. $t \times t$ c. $b \times b \times b \times b$

d. $5 \times 5 \times 7 \times 7 \times 7$ e. $2 \times 2 \times a \times a$

VI. Answer *any four* of the following **4x5=20**

35. Simplify a. $(-4)^3$ b. $(-3)^2 \times (-5)^2$ c. $(-3) \times (-2)^3$

d. $(-2)^3 \times (-10)^3$ e. $(7)^3$

36. Write the following numbers in the expanded form:

279404 3006194, 2806196, 120719, 20068

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37. A garden is 90 m long and 75 m wide. A path 5m wide is to be built outside and around it. Find the area of the path and the area of the garden?

38. Find the amount to be paid at the end of 3 years in each case

a. Principal=rupees 1200at 12% per annum

b. Principal= rupees 7500 at 5% per annum

39. Simplify these expressions and find their values if x=3, a=-1, b=-2

$a)\ 3x - 5 - x + 9$ $b)\ 2a - 2b - 4 - 5 + a$

40. Construct triangle DEF, such that DE=5cm, DF=3cm, and $\angle EDF = 90^0$.